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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,063	03/26/2004	William Wold	INGN:106US	8527
32425	7590	06/12/2006	EXAMINER	
FULBRIGHT & JAWORSKI L.L.P. 600 CONGRESS AVE. SUITE 2400 AUSTIN, TX 78701			WHITEMAN, BRIAN A	
			ART UNIT	PAPER NUMBER
			1635	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/810,063	Applicant(s) WOLD ET AL.	
	Examiner Brian Whiteman	Art Unit 1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/15/06;5/2/06.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
 4a) Of the above claim(s) 1-22,39,40,42 and 48 is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 23-38,41,43-47 and 49 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/7/05,9/13/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Non-Final Rejection

Claims 1-49 are pending.

The amendment to the specification filed on 3/15/06 is acknowledged.

Election/Restrictions

Applicant's election without traverse of group III (claims 23-27, 32-38, 41-47, and 49) in the reply filed on 3/15/06 is acknowledged.

Applicant's election of species colon cancer and JP19K (it appears that there was a typographical error and applicant intended to elect gp19k) in the reply filed on 5/2/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Upon further consideration claims 28-31 are rejoined with the elected invention.

Claims 1-22, 39, 40, and 48 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and lung cancer, prostate cancer, ovarian cancer, testicular cancer, brain cancer, stomach cancer, uterine cancer, breast cancer, esophageal cancer, head & neck cancer, pancreatic cancer, liver cancer, kidney cancer, and blood cancer in claim 25 and 6.7K, RID-alpha, RID-beta, and 14.7K proteins in claim 41 and claim 42 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 3/15/06 and 5/2/06.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892 or on a PTO-1449, they have not been considered.

Claim Objections

Claim 24 is objected to because of the following informalities: the word "cell" is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 28-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 28-31 recites the limitation "said second therapy" in line 1. There is insufficient antecedent basis for this limitation in the claim. Suggest amendment the claims to depend from

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claim 27. In view of compact prosecution and to expedite prosecution, the examiner will interpret the claims to depend from claim 27.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 23-38, 41, 43-47, and 49 are rejected under 35 U.S.C. 103(a) as being obvious over Wold (US 6,627,190) taken with Walczak (C44).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

The patent of Wold is directed to delivering to a tumor (colon) a replication competent adenovirus expressing adenovirus death protein. See column 86 and Figure 4. The adenovirus lacks the gp19k region (column 10). Wold teaches that the ADP coding region is under control of MLP promoter (column 6). Wold teaches that the adenovirus further comprises a mutation in the E1A region, said mutation impairing binding of E1A to p300 and/or pRB (column 86). Wold further teaches combination therapy with radiation (column 12). However, the Wold does not specifically teach using expressing TRAIL from the adenovirus vector.

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However, at the time the invention was made, TRAIL was known to one of ordinary skill in the art for its tumoricidal activity as taught by Walczak. See page 157.

It would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Wold taken with Walczak, namely to express ADP and TRAIL from the adenoviral vector in a tumor. One of ordinary skill in the art would have been motivated to combine the teaching because expressing TRAIL and ADP are well known to one of ordinary skill in the art for treating tumors. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

It would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Wold taken with Walczak, namely to use radiation therapy in combination with the adenovirus expressing ADP and TRAIL from the adenoviral vector in a tumor. One of ordinary skill in the art would have been motivated to combine the teaching because expressing radiation therapy and cancer gene therapy are well known to one of ordinary skill in the art for treating tumors. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

In addition, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Wold taken with Walczak, namely to express ADP and TRAIL from the E3 region of the adenovirus. One of ordinary skill in the art would have been motivated to combine the teaching so that ADP and TRAIL are under control of the same promoter.

In addition, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Wold taken with Walczak, namely

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to express ADP and TRAIL from the MLP promoter in the E3 region of the adenovirus. One of ordinary skill in the art would have been motivated to combine the teaching so that ADP and TRAIL are under control of MLP promoter to have expression at the same time.

In addition, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Wold taken with Walczak, namely to use radiation therapy prior to, same time or after administration of the adenovirus expressing ADP and TRAIL. As a matter of designer's choice, one of ordinary skill in the art would have been motivated to combine the teaching to treat tumors in a mammal. The specification does not display any unexpected results when administering the second therapy prior to, same time, or after administration of the adenovirus.

Therefore the invention as a whole would have been *prima facie* obvious to one ordinary skill in the art at the time the invention was made

Claims 23-38, 43-47 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson (US 6197293) taken with Griffith et al. (US 6900185). Henderson teaches a replication competent adenovirus comprising the adenovirus death protein (ADP) (column 69). Henderson teaches using the adenovirus to treat cancer in humans (columns 1, 17, 29, and 33). Henderson teaches that radiation therapy is used to treat cancer (column 2). Henderson further teaches that some types of cancers are resistant to conventional therapies usually used to treat cancer (column 2). Henderson teaches that ADP can be under control of the E3 promoter or MLP promoter (columns 26-27). Henderson teaches using an additional transgene in the

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adenovirus (column 27). However, Henderson does not specifically teach expressing TRAIL from the adenovirus.

However, at the time the invention was made, Griffith teaches a method of treating cancer using an adenovirus comprising a promoter operably linked to a transgene encoding TRAIL (column 21). The cancer can be colon cancer (column 21). The cancer can be in a human (column 22). The method can further comprise administering a chemotherapeutic agent, radiotherapeutic agent, an immunomodulating agent (column 22). Griffith teaches deleting the E1 region of the adenovirus (column 11).

It would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Henderson taken with Griffith, namely to express ADP and TRAIL from the adenoviral vector in a tumor. One of ordinary skill in the art would have been motivated to combine the teaching because expressing TRAIL and ADP are well known to one of ordinary skill in the art for treating tumors. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

In addition, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Henderson taken with Griffith, namely to use radiation therapy in combination with the adenovirus expressing ADP and TRAIL from the adenoviral vector in a tumor. One of ordinary skill in the art would have been motivated to combine the teaching because expressing radiation therapy and cancer gene therapy are well known to one of ordinary skill in the art for treating tumors. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

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In addition, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Henderson taken with Griffith, namely to express ADP and TRAIL from the E3 region of the adenovirus. One of ordinary skill in the art would have been motivated to combine the teaching so that ADP and TRAIL are under control of the same promoter.

In addition, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Henderson taken with Griffith, namely to express ADP and TRAIL from the MLP promoter in the E3 region of the adenovirus. One of ordinary skill in the art would have been motivated to combine the teaching so that ADP and TRAIL are under control of MLP promoter to have expression at the same time.

In addition, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Henderson taken with Griffith, namely to delete the E1 region of the adenovirus. One of ordinary skill in the art would have been motivated to combine the teaching to impair binding of E1A to p300 or pRB.

In addition, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Henderson taken with Griffith, namely to use radiation therapy prior to, same time or after administration of the adenovirus expressing ADP and TRAIL. As a matter of designer's choice, one of ordinary skill in the art would have been motivated to combine the teaching to treat tumors in a mammal. The specification does not display any unexpected results when administering the second therapy prior to, same time, or after administration of the adenovirus.

Therefore the invention as a whole would have been *prima facie* obvious to one ordinary skill in the art at the time the invention was made.

Claims 23 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson (US 6197293) taken with Griffith et al. (US 6900185) as applied to Claims 23-38, 43-47 and 49 above, and further in view of Bruder et al. (Journal of Virology, 71:7623-7628, 1997).

Henderson taken with Griffith do not specifically teach using the adenovirus, wherein the gp19k region is deleted from the adenovirus.

However, at the time the invention was made, one of ordinary skill in the art understands that the adenovirus gp19K gene product associates with major histocompatibility complex class I proteins and prevents their maturation by sequestering them in the endoplasmic reticulum. The gp19K has been shown to block the ability of adenovirus-specific cytotoxic T lymphocytes to recognize virus-infected cells (page 7623).

It would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Henderson taken with Griffith in further view of Bruder, namely to delete the gp19k region from the adenovirus. One of ordinary skill in the art would have been motivated to combine the teaching so that the mammal's immune system can recognize the adenovirus and assist in killing the tumor cells infected with the adenovirus.

Therefore the invention as a whole would have been *prima facie* obvious to one ordinary skill in the art at the time the invention was made.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 23-26, 32-38, 41, 43-47 and 49 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-75 of copending Application No. 11/057710. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed to delivering to a tumor a replication competent adenovirus expressing adenovirus death protein and TRAIL. VRX-013 is used in the instant application working examples and is used in the method of the claims of ‘710.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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Claims 23-26, 32-34, 36-38, 41, 43-47 and 49 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9-11 of U.S. Patent No. 6,627,190 in view of Walczak (C44). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed to delivering to a tumor a replication competent adenovirus expressing adenovirus death protein. However, the claims from '190 do not specifically teach using expressing TRAIL from the adenovirus vector.

However, at the time the invention was made, TRAIL was known to one of ordinary skill in the art for its tumoricidal activity as taught by Walczak. See page 157.

It would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of claims from '190 taken with Walczak, namely to express ADP and TRAIL from the adenoviral vector in a tumor. One of ordinary skill in the art would have been motivated to combine the teaching because expressing TRAIL and ADP are well known to one of ordinary skill in the art for treating tumors. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

Therefore the invention as a whole would have been *prima facie* obvious to one ordinary skill in the art at the time the invention was made.

Claims 23-26, 32-38, 41, 43-47 and 49 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 11-15, 20-22, 24, 32-44, 60-75, and 97-108 of copending Application No. 09/351,778 (C43) in view of Walczak (C44). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed to delivering to a tumor a

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replication competent adenovirus expressing adenovirus death protein. However, the claims from '778 do not specifically teach using expressing TRAIL from the adenovirus vector.

However, at the time the invention was made, TRAIL was known to one of ordinary skill in the art for its tumoricidal activity as taught by Walczak. See page 157.

It would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of claims from '778 taken with Walczak, namely to express ADP and TRAIL from the adenoviral vector in a tumor. One of ordinary skill in the art would have been motivated to combine the teaching because expressing TRAIL and ADP are well known to one of ordinary skill in the art for treating tumors. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

Therefore the invention as a whole would have been *prima facie* obvious to one ordinary skill in the art at the time the invention was made.

This is a provisional obviousness-type double patenting rejection.

Claims 23-26, 32-38, 41, 43-47 and 49 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 28-72 of copending Application No. 11/249873 in view of Walczak (C44). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed to delivering to a tumor a replication competent adenovirus expressing adenovirus death protein. However, the claims from '873 do not specifically teach using expressing TRAIL from the adenovirus vector.

However, at the time the invention was made, TRAIL was known to one of ordinary skill in the art for its tumoricidal activity as taught by Walczak. See page 157.

It would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of claims from '873 taken with Walczak, namely to express ADP and TRAIL from the adenoviral vector in a tumor. One of ordinary skill in the art would have been motivated to combine the teaching because expressing TRAIL and ADP are well known to one of ordinary skill in the art for treating tumors. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

Therefore the invention as a whole would have been *prima facie* obvious to one ordinary skill in the art at the time the invention was made.

This is a provisional obviousness-type double patenting rejection.

Claims 23-26, 32-38, 41, 43-47 are directed to an invention not patentably distinct from claims 1-75 of commonly assigned US application 11/057,710. Specifically, for the reasons set forth under double patenting.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned US application, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting

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inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Whiteman whose telephone number is (571) 272-0764. The examiner can normally be reached on Monday through Friday from 7:00 to 4:00 (Eastern Standard Time), with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Paras, SPE – Art Unit 1635, can be reached at (571) 272-4517.

Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Fax Center number is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system

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For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

Brian Whiteman

A handwritten signature in black ink, appearing to read "B. Whiteman", with a stylized flourish at the end.

**BRIAN WHITEMAN
PATENT EXAMINER**